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Part VII

Environmental Protection Agency

Extension of Compliance Date for Emission Standards Applicable to JT3D Engines; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 87

[FRL 1323-1]

Control of Air Pollution From Aircraft and Aircraft Engines; Extension of Compliance Date for Emission Standards Applicable to JT3D Engines

AGENCY: Environmental Protection Agency.

ACTION: Final rulemaking.

SUMMARY: This action amends 40 CFR 87.31(c) to extend the final compliance date for smoke emission standards applicable to the JT3D aircraft engines from September 1, 1981 to January 1, 1985. This compliance schedule is compatible with the FAA noise operating rule applicable to most aircraft using the JT3D engine that are not flown in foreign commerce (14 CFR Part 91). The proposed amendment to 40 CFR 87.31(c) was published as a Notice of Proposed Rulemaking on March 24, 1978 (43 FR 12815).

EFFECTIVE DATE: January 7, 1980.

FOR FURTHER INFORMATION CONTACT: Dr. Richard Munt, Emission Control Technology Division, Office of Mobile Source Air Pollution Control, Environmental Protection Agency, 2565 Plymouth Road, Ann Arbor, Michigan 48105, (313) 668-4378.

SUPPLEMENTARY INFORMATION: On July 17, 1973, the Environmental Protection Agency (EPA) promulgated 40 CFR Part 87 establishing aircraft emission standards and test procedures (38 FR 19088). One provision of Part 87 is § 87.31(c), which is applicable to exhaust emissions of smoke from JT3D engines (Class T3). This provision was originally scheduled to take effect January 1, 1978.

On September 5, 1974, the Air Transport Association of America (ATA) submitted a petition to the EPA on behalf of 11 member airlines asking that the implementation date for this requirement be set back to March 1, 1981, and proposed that each operator of class T3 engines (class T3 engines, designated JT3D by the manufacturer, are those that are used principally on Boeing 707 and McDonnell-Douglas DC-8 aircraft) accomplish the necessary engine modifications in accordance with a plan approved by the EPA Administrator. This petition was based upon the need to respond to the anticipated delay in the availability of hardware as a consequence of technical problems encountered by the manufacturer, Pratt and Whitney, during the initial service evaluation.

In response to this petition, EPA promulgated a revision to the aircraft standards in December 1976 (42 FR 54861) permitting a phased compliance schedule, culminating in complete compliance by September 1, 1981.

In 1977, during the interagency review of the draft NPRM for a comprehensive revision of all aspects of the aircraft standards, it was suggested by the FAA that JT3D-powered aircraft, which are scheduled to be replaced as a part of the FAA noise reduction program be exempted from compliance with the smoke standards for JT3D engines (40 CFR 87.31(c)). This suggestion was incorporated in the NPRM published on March 24, 1978 (43 FR 12815). Without such an exemption, the airlines would be burdened with a costly modification program ($21 million total cost) by September 1981, only to have those engines replaced three years later in order to comply with the FAA noise rule. Specifically, the NPRM proposed a compliance schedule for smoke control identical to that required for compliance with the FAA noise rule by airplanes operated under FAR Parts 121 and 135 which are not operated in foreign commerce. It should be noted that airplanes operated under FAR Part 91 and those operated in foreign commerce would be covered by the same proposed schedule. This would result in the retrofit or replacement of all JT3D engines for smoke control by January 1, 1985, while all JT3D-powered airplanes not in foreign commerce would be in compliance with the noise requirements by that date.

Comments favorable to this proposed delay were received from the Air Transport Association and the International Air Transport Association (IATA). However, these organizations, as well as the European Civil Aviation Conference (ECAC), did express a preference that the rule be dropped altogether in agreement with the format of the proposed rules of the International Civil Aviation Organization (ICAO) which excludes any and all retrofit rules. The IATA and ECAC also voiced the opinion that the rule should not apply to foreign aircraft operating in the U.S. The issue, though, is whether to delay the smoke rule and not whether to have the rule: It is already promulgated.

The EPA is proceeding now with final rulemaking in order to provide guidance to the operators of JT3D-powered aircraft in this matter while other aspects of the March 1978 NPRM are still under review.

The primary effect of this action is to postpone for three years the elimination of visible smoke from most Boeing B707, B720 and McDonnell-Douglas DC-8 aircraft. At the end of that time, either the engines will have been modified for smoke and noise reductions, replaced by other engines which would meet both EPA smoke standards and FAA noise standards, or the entire aircraft will have been replaced by newer aircraft meeting the smoke and noise standards. Thus, the final effect is unchanged. The delay does not have serious consequences insofar as visible smoke is concerned, for by 1985 the B707 and DC-8 aircraft will have dropped from 20 percent of the fleet today, to only 7 percent. Such aircraft would then account for less than 5 percent of the total takeoffs (when visible smoke emissions are most troublesome), because they are used for long range flight and undergo fewer landing-takeoff cycles.

This revision may provide considerable savings in cost to the airlines. The cost for a retrofit of the entire 1981 fleet of JT3D-powered aircraft is estimated to be $21 million which would be totally lost by 1985 if, as is most likely, all affected aircraft are either retired or re-engined from compliance with the FAA noise rule.

Postponement of this smoke rule will add to the hydrocarbon and carbon monoxide burden imposed on the air quality regions surrounding major airports. This additional burden occurs because the low-smoke combustors which would be installed also reduce the emissions of those gaseous pollutants, especially during taxiing and idling of the aircraft at the airport. The delay, then, will result in the continued use of the higher-polluting combustors (of hydrocarbons and carbon monoxide) for an additional 3 years and 4 months. This effect is short term, however, as the engines will either be modified or replaced by 1985 (most likely the latter as fuel efficient replacement engines make this an attractive alternative). The additional national emissions that will result from the delay have been estimated to be 17,000 and 5,300 tons per year for hydrocarbons and carbon monoxide, respectively (assuming engine modification, not replacement). On the other hand, the eventual replacement of these engines by newer ones meeting the EPA gaseous emission standards will result in a large emission savings, roughly 30,000 and 20,000 tons per year for hydrocarbons and carbon monoxide, respectively.

Delay in the full compliance with the noise rule beyond January 1, 1985 will

not be considered a sufficient reason for the further delay in the smoke retrofit schedule because a certifiable hardware design and ample time for retrofit are both available.

The contents of this rulemaking have been coordinated with the Secretary of Transportation in order to assure appropriate consideration of aircraft safety. There will be continuing consultation on this issue between this Agency and that Department until full compliance is achieved. Should the Secretary of Transportation determine at any point that the emission standard cannot be met within the specified time without creating a safety hazard, appropriate modifications will be made to the standard or its effective date.

Availability of Documents

Copies of EPA's Summary and Analysis of Comments to the NPRM and supporting documentation are available for inspection and copying at the U.S. Environmental Protection Agency, Central Docket Section, Room 2903 (Docket No. OMSAPC–78–1), 401 M Street, SW., Washington, D.C. 20460. As provided in 40 CFR Part 2, a reasonable fee may be charged for copying services.

Dated: October 30, 1979.

Douglas M. Costle,

Adminstrator, Environmental Protection Agency.

Part 87, Chapter I of Title 40 of the Code of Federal Regulations is amended as follows:

1. Section 87.31(c) is revised to read as follows:

§ 87.31 Standards of exhaust emissions.

* * * * *

(c) Exhaust emissions of smoke from each in-use aircraft gas turbine engine of Class T3 shall not exceed a smoke number of 25. Each operator shall achieve compliance in accordance with the following schedule:

(1) One quarter of its operational Class T3 engines by January 1, 1981.

(2) One half of its operational Class T3 engines by January 1, 1983.

(3) All of its operational Class T3 engines by January 1, 1985.

This compliance schedule notwithstanding, Class T3 engines which do not meet a smoke number of 25 may continue to be operated if, under an FAA approved plan, replacement engines or replacement airplanes have been ordered and are scheduled for delivery prior to January 1, 1985, but not after the dates specified in the plan. For the purpose of this paragraph, replacement engines are engines of a class different from Class T3 and have been shown to meet the smoke emission standards in this part appropriate to their class.

(Secs. 231, 301(a), Clean Air Act, as amended (42 U.S.C. 7571, 7601(a)))

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